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9 GRAPHICS INC., MATROX
INTERNATIONAL CORP., and MATROX
10 TECH, INC.

11 UNITED STATES DISTRICT COURT
12 NORTHERN DISTRICT OF CALIFORNIA
13 SAN FRANCISCO DIVISION

14 RICOH COMPANY, LTD.,
15 Plaintiff,

16 vs.

17 AEROFLEX INCORPORATED, AMI
18 SEMICONDUCTOR, INC., MATROX
ELECTRONIC SYSTEMS LTD., MATROX
19 GRAPHICS INC., MATROX
INTERNATIONAL CORP., MATROX TECH,
20 INC., AND AEROFLEX COLORADO
21 SPRINGS, INC.,
Defendants.

23 SYNOPSISYS, INC.,
24 Plaintiff,

25 vs.

26 RICOH COMPANY, LTD.,
27 Defendant.

Case No. C03-4669 MJJ (EMC)

Case No. C03-2289 MJJ (EMC)

**NOTICE OF MOTION AND MOTION FOR
SUMMARY JUDGMENT OF
UNENFORCEABILITY DUE TO
INEQUITABLE CONDUCT
[SUMMARY JUDGMENT MOTION NO. 5]**

Date: September 26, 2006
Time: 9:30 a.m.
Place: Courtroom 11, 19th Floor
Judge: Hon. Martin J. Jenkins

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NOTICE OF MOTION AND MOTION

PLEASE TAKE NOTICE that on September 26, 2006 at 9:30 a.m., or as soon as counsel may be heard before the Honorable Martin Jenkins, United States District Judge, Plaintiff Synopsys Inc., (“Synopsys”) and Defendants Aeroflex Incorporated, AMI Semiconductor, Inc., Matrox Electronic Systems Ltd., Matrox Graphics Inc., Matrox International Corp., Matrox Tech, Inc., and Aeroflex Colorado Springs, Inc. and Plaintiff Synopsys, Inc. (collectively “Customer Defendants”) will and hereby do move this court under Rule 56 for a summary judgment of unenforceability due to inequitable conduct. Synopsys and Customer Defendants each seek a judgment from the Court, pursuant to Rule 56 of the Federal Rules of Civil Procedure, that U.S. Patent No. 4,922,432 (“the ’432 patent”) is unenforceable due to inequitable conduct committed during the patent application process.

This motion is based upon the accompanying Memorandum of Points and Authorities, the Declaration of Denise M. De Mory filed herewith, all papers and pleadings filed herein, and upon any other oral and documentary evidence that may be presented to the Court.

MEMORANDUM OF POINTS AND AUTHORITIES

I. INTRODUCTION

The inventors of the ’432 patent, failed to disclose at least seven material prior art references to the Patent and Trademark Office (“PTO”). This inequitable conduct summary judgment motion is based on what Defendants have identified as the single most egregious nondisclosure of highly material information, the failure to disclose the article T.J. Kowalski et al., “The VLSI Design Automation Assistant: From Algorithms to Silicon,” IEEE Design & Test, pp. 33-43 (1985) (hereinafter “Kowalski85”). The PTO recently ordered reexamination of the ’432 patent based on Kowalski85, thereby finding it to be both material and not cumulative of other references cited during the prosecution of the patent. Although the inventors of the ’432 patent were aware of Kowalski85 during the pendency of the patent application, they failed to disclose this highly material reference. From this evidence, an intent to deceive can be inferred as a matter of law.

Given this threshold showing of knowledge and high materiality, Ricoh must provide a “non-frivolous explanation” or “a plausible justification or excuse” for the nondisclosure. *Monsanto Co. v.*

Bayer Bioscience N.V., 363 F.3d 1235, 1241 (Fed. Cir. 2004). Because of Ricoh's inexcusable thirteen year delay in filing this suit, named inventor Dr. Hideaki Kobayashi can no longer recall whether this information was given to his patent attorney for submission to the PTO, much less explain why it was not provided to the PTO. Thus, Ricoh has not and cannot come forward with any such explanation, and summary judgment must be granted against it.

II. STATEMENT OF FACTS

A. Prosecution History of the '432 Patent

The application that led to the '432 patent was filed on January 13, 1988 and was entitled "Knowledge Based Method and Apparatus for Designing Integrated Circuits Using Functional Specifications." Hideaki Kobayashi and Masahiro Shindo are the only named inventors. As required by the patent rules, Kobayashi and Shindo both signed an oath and declaration promising to disclose material information to the PTO. Ex. 40 at 1.¹

In the course of the prosecution, the applicants were forced to make certain limiting statements about the scope of their proposed claims. In particular, after a personal interview with the Examiner on October 19, 1989 that discussed certain claims, "[i]t was agreed that the features 'flow chart editor' and 'expert system for translating the flowchart into a netlist defining the necessary hardware cells of the integrated circuit' are patentable [sic] distinct from the reference identified above." Ex. 40 at 4. The '432 patent issued thereafter on May 1, 1990.

During prosecution of the '432 patent, the applicants disclosed a total of six references to the Examiner. In an Information Disclosure Statement ("IDS") filed on January 13, 1988, the applicants identified three patents and one publication that were "not believed to be material to the patentability of the present invention" but were provided for background information. Ex. 41. Two additional references were disclosed to the PTO on April 21, 1989 "which may be considered material." Ex. 42. One of these potentially material publications is an article published in 1979 and entitled "The CMU

¹ All exhibits referenced in this motion are attached to the Declaration of Denise M. De Mory In Support of Synopsys' and Customer Defendants' Summary Judgment Motions filed herewith. All deposition references are likewise included in the De Mory Declaration.

1 Design Automation System, An Example of Automated Data Path Design” by Parker et al. (hereinafter
2 “Parker79”).

3 **B. The Inventors’ Knowledge of Kowalski’s VDAA System.**

4 The Kowalski85 article, in which a 1984 publication by T.J. Kowalski, “The VLSI Design
5 Automation Assistant: A Knowledge-Based Expert System,” Carnegie-Mellon University Ph.D.
6 Thesis (April 1984) (hereinafter “Kowalski Thesis”) was incorporated by reference, describes a
7 system, called the VLSI Design Automation Assistant (“VDAA”) that included an expert system
8 developed by Dr. Kowalski while a student at Carnegie Mellon University. *See* Ex. 36.

9 In a manuscript written in 1988 and published in 1989, while the ’432 patent application was
10 pending, co-inventors Dr. Kobayashi and Mr. Shindo, together with Mr. Shindo’s immediate
11 subordinate at Ricoh, Mr. Suehiro, published an article entitled “KBSC: A Knowledge-Based
12 Approach to Automatic Logic Synthesis.”² Ex. 43 (“1989 KBSC Article”). In the 1989 KBSC
13 Article, Dr. Kobayashi et al. discuss and compare eight different systems to KBSC (the commercial
14 embodiment of the patented invention), and distinguish the eight systems collectively as follows:
15 **“KBSC is clearly distinguished from other logic synthesis systems in terms of its flowchart input**
16 **form and rule-based approach** to automatic data-path and control logic synthesis.” *Id.* at
17 KBSC000871 (emphasis added). With regard to the VDAA system, which the 1989 KBSC Article
18 calls DAA, Dr. Kobayashi et al. only distinguish Kowalski’s system based on the flowchart input that
19 has now been disclaimed in this litigation, as Dr. Kobayashi et. al expressly recognized Kowalski’s
20 system has both rules and architecture independent input as follows: “The Design Automation
21 Assistant (DAA) [5] is an expert system that uses heuristic rules to synthesize architectural
22 implementation from an algorithmic description with design constraints. **Input to DAA is written in**
23 **ISPS**, a description for a Digital Equipment Corporation computer. **The DAA produces a hardware**
24 **network composed of modules, ports, links, and symbolic microcode.”** *See id.* at KBSC000870-
25 871 (emphasis added). In the bibliography following the conclusion, the 1989 KBSC Article lists as
26

27 ² The manuscript for this article was first submitted on November 15, 1988.
28

reference [5] the Kowalski85 article cited in the reexamination of the '432 patent.³ *Id.* at KBSC000872.

Notwithstanding their detailed understanding of VDAA as evidenced by the 1989 KBSC Article, the inventors did not disclose either the VDAA system or Kowalski85 or the Kowalski Thesis to the PTO during prosecution of the '432 patent. The fact that the inventors did disclose, through the Parker79 article, an earlier design system created at Carnegie Mellon University called the CMU-DA (Carnegie Mellon University – Design Assistant) system does not cure this failure. Dr. Kobayashi et al. recognized that the Parker79 system was different than VDAA because they separately addressed it in the 1989 KBSC Article as follows: “Input to the CMU-DA system [4] is an algorithmic description in ISP language. ISP description is translated to the first-level path graph with interconnections of abstract components. It is then mapped to the second level of the data-path graph with selected physical modules.” *Id.* at KBSC000870.

C. Reexamination Order.

A request for reexamination of the '432 patent was filed in January of 2006 based on Kowalski85 and the Kowalski Thesis. Ex. 38. On February 24, 2006, the PTO ordered reexamination of the '432 patent because the examiner determined that a substantial new question of patentability affecting at least claim 13 – the only asserted independent claim in this case – was raised by the request based on the Kowalski references. Ex. 39. **The PTO stated that the Kowalski85 and Kowalski Thesis references were not cumulative** to the information of record in the '432 patent file and that they **would have been considered important by a reasonable examiner** in deciding whether or not at least claim 13 was patentable because they taught each element of that claim. *Id.* at p.3. In other words, the PTO has determined that the Kowalski85 and Kowalski Thesis references are **material** to the patentability of at least claim 13 of the '432 patent.

³ The 1989 KBSC Article lists the Kowalski85 article as having been published in 1986, not in 1985. This is clearly a typographical error since the authors, title, publication magazine, volume, page numbers, month and day – every part of the citation except the year – are identical to the Kowalski85 article.

1 III. LEGAL STANDARDS

2 A. Standards for Summary Judgment

3 Summary judgment is appropriate “if the pleadings, depositions, answers to interrogatories,
4 and, admissions on file, together with the affidavits, if any, show that there is no genuine issue of
5 material fact and that the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P.
6 56(c). Thus, the Court may grant summary judgment when no reasonable jury could return a verdict
7 for the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249-250 (1986).

8 It is well settled that “summary judgment is as appropriate in a patent case as in any other.”
9 *Avia Group Int’l, Inc. v. L.A. Gear California, Inc.*, 853 F.2d 1557, 1561 (Fed. Cir. 1988) (internal
10 quotations omitted). Although summary judgment of inequitable conduct is uncommon, it is also
11 appropriate if there is no genuine issue of material fact.⁴ See *Digital Control Inc. v. Charles Mach.*
12 *Works*, 437 F.3d 1309, 1318 (Fed. Cir. 2006). Further, “a genuine issue of material fact is not raised
13 by the submission of ‘merely conclusory statements or completely insupportable, specious, or
14 conflicting explanations or excuses’” to explain a failure to disclose. *Monsanto*, 363 F.3d at 1240; see
15 also *Digital Control*, 437 F.3d at 1313-14 (finding summary judgment on inequitable conduct
16 appropriate where the declarations submitted were bare declarations of lack of intent to mislead and
17 the explanations provided were either nonresponsive or lacked evidentiary support). To survive
18 summary judgment, the nonmovant must provide a “non-frivolous explanation” or “a plausible
19 justification or excuse” for the nondisclosure. *Monsanto*, 363 F.3d at 1241.

20 B. Inequitable Conduct Requires Showing Materiality and Intent to Deceive

21 “Patent applicants owe a duty of candor and good faith to the PTO.” *Bruno Indep. Living Aids,*
22 *Inc. v. Acorn Mobility Serv. Ltd.*, 394 F.3d 1348, 1351 (Fed. Cir. 2005). A failure to discharge this

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25 ⁴ See, e.g., *Molins PLC v. Texton, Inc.* 48 F.3d 1172 (Fed. Cir. 1995); *Paragon Podiatry Lab., Inc. v. KLM Lab, Inc.*, 984
26 F.2d 1182 (Fed. Cir. 1993); *Bruno Indep. Living Aids, Inc. v. Acorn Mobility Serv., Ltd.*, 394 F.3d 1348 (Fed. Cir. 2005);
27 *Bristol-Myers Squibb Co. v. Rhone-Poulenc Roper, Inc.*, 326 F.3d 1226 (Fed. Cir. 2005); *Pharmacia Corp. v. Par Pharm.,*
28 *Inc.*, 417 F.3d 1369 (Fed. Cir. 2005); *GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268 (Fed. Cir. 2001); *Brasseler, U.S.A. I, L.P.*
v. Stryker Sales Corp., 267 F.3d 1370 (Fed. Cir. 2001); *Perseptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d
1315 (Fed. Cir. 2000).

duty can result in a finding of inequitable conduct that renders an entire patent unenforceable. *See Pharmacia Corp. v. Par Pharm., Inc.*, 417 F.3d 1369, 1374-75 (Fed. Cir. 2005). Inequitable conduct can result when there is evidence that an applicant failed to comply with this duty by failing to disclose material information with the intent to deceive. *See Ferring B.V. v. Barr Lab., Inc.*, 437 F.3d 1181, 1186 (Fed. Cir. 2006). Where the inequitable conduct alleged is the failure to disclose relevant prior art to the PTO, it must be proven by clear and convincing evidence that: (1) the prior art at issue is material; (2) the applicant had knowledge of the prior art and its materiality; and (3) the applicant failed to disclose the prior art with the intent to mislead the PTO. *See FMC Corp. v. Manitowoc Co., Inc.*, 835 F.2d 1411, 1415 (Fed. Cir. 1987).

1. Materiality

Information is “material” if there is a “substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent.” 37 C.F.R. § 1.56(a) (1987).⁵ Withheld information that is not as pertinent as that considered by the examiner or is merely cumulative to that considered by the examiner is not material information. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1179 (Fed. Cir. 1995).

2. Intent to Deceive

Intent to deceive is most often proven by a showing of acts, the natural consequence of which are presumably intended by the actor. *See, e.g., Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1442 (Fed. Cir. 1991) (direct evidence of intent to mislead is often absent). Generally, intent must be inferred from the facts and circumstances surrounding the applicant’s conduct. *See Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1189-90 (Fed. Cir. 1993).

When the patentee fails to offer a credible explanation for the nondisclosure, an inference of deceptive intent may be drawn. *See Bruno Indep. Living Aids*, 394 F.3d at 1354. Even when an explanation is offered, in evaluating whether the proffered explanation is credible, courts have found

⁵ PTO Rule 56 was amended in 1992 and it defines materiality differently today. Because the ‘432 patent was prosecuted under the prior version of PTO Rule 56, that definition of materiality is the version that applies for purposes of this motion. *See, e.g., Baxter Int’l, Inc. v. McGaw, Inc.*, 149 F.3d 1321, 1328 n.3 (Fed. Cir. 1998).

that “where withheld information is material and the patentee knew or should have know[n] of that materiality, he or she can expect to have great difficulty in establishing subjective good faith sufficient to overcome an inference of intent to mislead.” *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1239 (Fed. Cir. 2003); *see also Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1256 (Fed. Cir. 1997) (“An inference of intent is warranted where a patent applicant knew or should have known that the withheld information would be material to the PTO’s consideration of the patent application.”). Moreover, “[a] mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct) will not suffice in such circumstances.” *FMC*, 835 F.2d at 1416.

3. Balancing Materiality and Intent to Deceive

Once a threshold level of materiality and intent is shown, the “court must then determine whether the questioned conduct amounts to inequitable conduct by balancing the levels of materiality and deceptive intent, with a greater showing of one factor allowing a lesser showing of the other.” *Digital Control*, 437 F.3d at 1313; *see also Halliburton*, 925 F.2d at 1439. “Courts must view the involved conduct ‘in light of all the evidence’ and must then determine whether that conduct in its totality manifests a sufficiently culpable state of mind to warrant a determination that it was inequitable.” *Molins*, 48 F.3d at 1181 (internal citations omitted); *see also Paragon Podiatry*, 984 F.2d at 1190 (granting summary judgment for inequitable conduct where “the evidence is so one-sided that the factual issue of intent may be decided as a matter of law.”).

Finally, patentees are not permitted to make unilateral decisions regarding whether to disclose information to the PTO. *See GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001). Indeed, it is well settled that “close cases should be resolved by disclosure, not unilaterally by applicant.” *LaBounty Mfg., Inc. v. United States Int’l Trade Comm’n*, 958 F.2d 1066, 1076 (Fed. Cir. 1992); *see also Critikon*, 120 F.3d at 1257. Moreover, “[a] patentee’s failure to appreciate the legal significance of the facts that it failed to disclose [does] not absolve it of its duty to disclose.” *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1376 (Fed. Cir. 2001). “[O]ne should not be able to cultivate ignorance.... Where one does, deceptive intent may be inferred.” *Id.* at 1383.

1 **IV. ARGUMENT**

2 **A. Kowalski85 Is Material**

3 In this case, the PTO has already determined that the Kowalski85 article (discussing the VDAA
4 system) is material. *See* Ex. 39. PTO decisions regarding patentability have strong probative value in
5 determining materiality. *See Molins*, 48 F.3d at 1179 (“[T]he result of a PTO proceeding that assesses
6 patentability in light of information not originally disclosed can be of strong probative value in
7 determining whether the undisclosed information was material.”).

8 Additionally, the inventors themselves recognized the materiality of Kowalski85. In the 1989
9 KBSC Article, they acknowledged that the only difference between Kowalski85 and the described
10 KBSC system is KBSC’s flowchart input, which has been disclaimed as a limitation in this litigation.⁶
11 Thus, the evidence shows that, contemporaneous with the prosecution of the patent, the inventors
12 recognized the materiality of this reference - ***but did not submit it to the PTO***. This evidence should
13 trump whatever Ricoh now argues in the throes of litigation to save its case from dismissal.

14 Indeed, the materiality of Kowalski85 is confirmed by comparing the 1989 KBSC Article
15 discussing Kowalski85 to the examiner’s reasons for allowance as summarized in the interview
16 summary. Specifically, the inventors acknowledge that Kowalski85 “uses heuristic rules to
17 synthesize....” Ex. 43 at KBSC000871. Yet the examiner allowed the claims over the cited prior art
18 because the claims included an “expert system....” Ex. 40 at RCL000228. Thus, Kowalski85, which
19 discloses rules in an expert system, is material because it would have been important to a reasonable
20 examiner in determining patentability. *See* Ex. 43 at KBSC000861 (explaining that KBSC uses “an
21 expert system where IF-THEN-type rules for logic synthesis are stored . . .”).

22 Moreover, as set forth in Motion No. 4, Defendants assert not only that the Kowalski work was
23 material, but that it is invalidating anticipatory work. Because an anticipatory reference includes every
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26 ⁶ As the Court will likely recall, Ricoh has disclaimed the flowchart limitation with regard to the asserted Claims of the
27 ‘432 patent. During the claim construction process, Synopsys and the Customer Defendants argued that the Claims were
28 limited to a flowchart input. Ricoh argued against this construction, and the Court agreed, ultimately adopting an
interpretation of “architecture independent actions and conditions” that does not require input in a flowchart form.

1 claimed limitation, such a reference is clearly material.

2 Ricoh has had the opportunity to rebut this evidence but has failed to do so. While Dr.
3 Soderman opines in his expert report that the VDAA system would not have been material, his
4 litigation-inspired opinion is contrary to the PTO's own independent findings about this same
5 reference and should be rejected. Specifically, Dr. Soderman's opinions must be rejected because they
6 are contrary to the contemporaneous evidence. For example, Dr. Soderman opined that the
7 Kowalski⁸⁵ article describing the VDAA system is cumulative of the Parker⁷⁹ and Trickey references.
8 This is not correct. As the inventors acknowledged in the 1989 KBSC Article, the Parker⁷⁹ system
9 relates to a different version of the CMU-DA, one which did not incorporate the elements of Dr.
10 Kowalski's work (such as his expert system) that are critical to the '432 patent and hence would have
11 been extremely important to the examiner's patentability determination. *See also* Ex. 37 (Kowalski) at
12 68:8-69:7 (testifying that CMU-DA was a "different system" from VDAA).) It is disingenuous for
13 Ricoh, now during litigation, to fail to acknowledge key differences between the CMU-DA and the
14 VDAA systems.

15 Moreover, the ten-page Trickey article only mentions the VDAA in one sentence in passing as
16 one type of seven other kinds of behavioral compilers. *See* Ex. 47 at RCL000188. Indeed, the Trickey
17 article lists the VDAA as one of 29 references. *Id.* at RCL000197. The passing reference to the
18 VDAA, however, is not sufficient for the examiner to have considered it during prosecution. Under 37
19 C.F.R. § 1.56(b), the inventors were required to list each non-patent publication on an information
20 disclosure statement and to provide an actual copy in order to satisfy their duty of disclosure under §
21 1.56(a) and to draw the examiner's attention to the publication. *See* 37 C.F.R. §§ 1.56(b) and 1.97-
22 1.99.

23 **B. The Inventors Had Knowledge of Kowalski⁸⁵ and Its Materiality**

24 There can also be no dispute that the applicants had knowledge of Kowalski⁸⁵ and its
25 materiality. The 1989 KBSC Article specifically discussed the VDAA system and compared it to
26 KBSC (the commercial embodiment of the '432 patent). Ex. 43 at KBSC000870. Moreover, the
27 inventors disclosed to the PTO two prior art references in April 1989 relating to prior art systems
28

described in the 1989 KBSC Article. *See* Ex. 42. Those other systems, indicated to be less relevant in the 1989 KBSC Article (i.e., missing more elements of KBSC and hence the claims of the '432 patent) were cited to the PTO with an indication that those references "may be considered material." *Id.* at RCL000186. There can be no good faith reason for the inventors to selectively disclose certain admittedly material prior art systems – but not VDAA when the inventors were fully aware of the VDAA and other references discussed in their 1989 KBSC Article. Even if the inventors had doubts about whether Kowalski85 was material – which they should not have had – they should have erred on the side of disclosure. *See LaBounty Mfg.*, 958 F.2d at 1076 ("close cases should be resolved by disclosure, not unilaterally by the applicant.")

3. The Inventors Intended to Deceive the PTO by Failing to Disclose Kowalski85

The Federal Circuit has expressly recognized that direct evidence of intent to mislead the PTO is usually not available. *See Halliburton*, 925 F.2d at 1442. Rather, intent is generally inferred from the facts and circumstances surrounding the applicant's conduct. *See Paragon Podiatry*, 984 F.2d 1189-90. Thus, the court has held that "intent may be inferred where a patent applicant knew, or should have known, that withheld information could be material to the PTO's consideration of the patent application." *Brasseler*, 267 F.3d at 1376.

Here, the undisputed facts show that the inventors' actions are sufficient to infer that they intentionally withheld from the PTO the Kowalski85 Article describing the VDAA system:

1. The 1989 KBSC Article compared and contrasted KBSC to eight prior art systems, including the VDAA, and cited to the Kowalski85 Article in its list of references. Of these eight systems, the inventors disclosed two prior art systems to the PTO but chose not to disclose the VDAA and several others.⁷

⁷ That the 1989 KBSC Article discussing prior art such as VDAA was published after the inventors filed the application for the '432 patent does not alter their duty to disclose VDAA, even if they were unaware of that prior art until writing this article. The patentee's [duty of candor extends through the patent's entire prosecution history.] *Fox Indus., Inc. v. Structural Preservation Sys., Inc.*, 922 F.2d 801, 803 (Fed. Cir. 1991).

2. In April 1989 – just five months after submitting the 1989 KBSC Article manuscript and two months after it was revised for publication – the inventors disclosed to the PTO the CMU-DA, a different design assistant from Carnegie Mellon University without rules, and admitted that even this system may be material.

3. The PTO has recently found that the Kowalski85 article (describing the VDAA) is not cumulative of the cited prior art and that it would have been important to a reasonable examiner in determining the patentability of the '432 patent, thus satisfying the materiality standard.

4. The Kowalski85 Article describing the VDAA is but one of at least seven highly relevant prior art references that the inventors failed to disclose to the PTO.⁸

5. Dr. Kobayashi does not know why he failed to disclose the VDAA to the PTO and he cannot provide any affirmative evidence of good faith; indeed Mr. Colaianni and Dr. Soderman, Ricoh's experts, do not cite to any affirmative evidence of good faith.

These facts demonstrate “an overwhelming showing of materiality plus applicant's knowledge of that materiality,” which, “raise[s] an inference of intent so strong as to require a convincing showing of subjective good faith to offset it.” *FMC*, 835 F.2d at 1415 n.7. With a highly material reference such Kowalski85 (unquestionably material enough to warrant a reexamination) and the inventors' clear knowledge of that reference, Ricoh “can expect to have great difficulty in establishing [the inventors'] subjective good faith sufficient to overcome an inference of intent to mislead.” *Bristol-Myers Squibb*, 326 F.3d at 1239; *see also Halliburton*, 925 F.2d 1439. Summary judgment of inequitable conduct should be granted given these undisputable facts. *See Paragon Podiatry*, 984 F.2d at 1190 (granting summary judgment for inequitable conduct where “the evidence is so one-sided that the factual issue

⁸ Although not the basis for the instant motion, that there are multiple omissions heightens the seriousness of the inventors' conduct. *See Ferring B.V. v. Barr Lab., Inc.*, 437 F.3d 1181, 1194 (Fed. Cir. 2006) (finding “not simply a single omission” but “multiple omissions over a long period of time – a fact that heightens the seriousness of the conduct.”). In this case there are at least six additional highly relevant omissions. These omissions including, *inter alia*, failure to disclose an on-sale bar, prior publication of the system by a named inventor and failure to disclose a co-inventor. These additional omissions can heighten the effect of the omission at issue even if they do not themselves constitute inequitable conduct. *See Refac Int'l, Ltd. v. Forward Reference Sys., Ltd.*, 81 F.3d 1576, 1580, 1582 (Fed. Cir. 1996). Further, a pattern of misrepresentations, omissions and half-truths is sufficient to demonstrate clear and convincing evidence of deceptive intent. *See Perseptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1318, 1320 (Fed. Cir. 2000).

1 of intent may be decided as a matter of law.”).

2 **V. CONCLUSION**

3 The undisputable facts demonstrate that Kowalski85 is a material reference, that the inventors
 4 knew about Kowalski85 and knew or should have known of its materiality but still failed to disclose
 5 Kowalski85 to the PTO. These facts and the inventors’ consistent failure to disclose Kowalski85 and
 6 other material information – while disclosing less relevant prior art – to the PTO are more than
 7 sufficient to infer their intent to deceive the PTO. Ricoh has not and cannot provide any affirmative
 8 evidence of good faith. Thus, summary judgment of inequitable conduct should be granted.

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Respectfully submitted,

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 22 INTERNATIONAL CORP., and
 23 MATROX TECH, INC.
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